DOCUMENT RESUME

ED 425 467 CS 216 541

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TITLE Fair Play: Teaching the Logical Fallacies.
PUB DATE 1997-03-00
NOTE 9p.; Paper presented at the Annual Meeting of the Conference on College Composition and Communication (48th, Phoenix, AZ, March 12-15, 1997).
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Freshman Composition; Higher Education; Instructional Effectiveness; *Logical Thinking; *Persuasive Discourse; Racial Bias; *Scientific Attitudes; Sex Bias
IDENTIFIERS *Herrnstein (Richard); *Logical Fallacies; Science Writing

ABSTRACT

This paper describes a freshman composition course which looks at racism and sexism in science, and within which the instructor uses a 1989 "Atlantic Monthly" piece by R.J. Herrnstein, co-author with Charles Murray of "The Bell Curve." In his article, Herrnstein argues that the intelligence of the nation is declining because educated young women are not having enough children. The instructor first teaches her students about logical fallacies and sophistry, since her initial pedagogical aim is to give her students the tools to critique a bad argument. The teacher reconsiders her own practices, then defending her pedagogy and her campaign against Herrnstein as a lesson in the ethics of argument, as following in a long tradition of teaching the fallacies to promote fair play. The paper considers two essays on teaching the fallacies, those of David Hitchcock and J. Anthony Blair. The paper then examines Herrnstein's article in detail, as an example of fallacious reasoning. The paper concludes that by the end of the course, Herrnstein's vision of the future is not persuasive to all her students--the instructor's pedagogical goal of planting the seeds of distrust has been accomplished. (Contains 11 references.) (NKA)

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CCCC, 13-16 March 1997, Phoenix AZ

Fair Play: Teaching the Logical Fallacies

My freshman composition course looks at racism and sexism in science; in it, I use a 1989 Atlantic piece by Herrnstein, who is notorious as co-author of The Bell Curve. This precursor of the theory he later advanced with Charles Murray is provocatively titled, "IQ and Falling Birth Rates." And in it he does indeed argue that the intelligence of the nation is declining, because educated young women aren't having enough children. The article is a challenge for my students; some find it offensive, others merely troubling. But their objections are muffled by a general agreement that Herrnstein's logic is irrefutable. "We may not like it, " they sigh, "but he is right!"

I then teach them about logical fallacies--just a few. And we discuss sophistry, that devious and deceptive argument of which Plato accused his competitors. I have a clear pedagogical aim--to give them the tools to critique a bad argument. And I have my own agenda--to demonstrate that sexist, racist arguments are usually fallacious ones, to label Herrnstein, the Harvard professor, whom my students would otherwise respect, a sophist, an evil man.

Current discussions of the logical fallacies led me to question my own practices, however. So I eavesdropped on listserv exchanges, read a bit and reconsidered. In this talk, I plan to defend my pedagogy, and my campaign against Herrnstein. But I defend it not because it teaches students to argue well, or to avoid arguing poorly, or even because it allows them to disagree with their elders. I defend it as a lesson in the ethics of argument, as following in a long tradition of teaching the fallacies to promote fair play.

The fallacies, as Hamblin points out, have endured for years, have risen and fallen with Aristotelianism, and have defied classification in most systems of logic. They have also puzzled teachers, in a variety of disciplines, from formal logic to composition. Do we teach the fallacies so that students can avoid them, like the fashion "don'ts" of women's magazines? Do we teach them so that students will resist them, so that they can identify errors,

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and counterattack? Can students learn anything useful about argument from seeing it done wrong?

In a pair of essays on teaching the fallacies, in Hansen and Pinto's Fallacies, Hitchcock and Blair offer opposing positions. No, says Hitchcock. Teaching mistakes isn't useful; it's better to concentrate on the positive. And those well-versed in correct thinking will be proof against fallacious reasoning: "Knowing how to reason well," he assures us, "a good reasoner will recognize when some requirement of good reasoning is not satisfied" (Hitchcock 325). Yes, says Blair. It's not essential to teach fallacies, but if they are presented thoroughly and in context, they are a useful critical thinking tool. Usually, they aren't taught well, he admits, but that's not the fallacies' fault. Blair concludes with a warning that all good teachers would second: "So yes, assuredly, there are dangers, and bad instructors will fall prey to them. However, I would worry equally about the job weak instructors will do with any tool of argument criticism" (336).

I was not surprised by this disagreement, which echoed the observations I'd heard teachers make about any formal approaches to teaching argument. Labels aren't needed; labels are useful. Logic is intuitive; logic must be taught. The fallacies are old-fashioned and boring; the fallacies are fun! I am in the latter group--I find it useful to name things, I do teach a bit of logic in all my composition courses, and my students are always entertained by the fallacies. It's hard not to get a laugh as you explain that technique of dismissing one's opposition with disdain, the wonderfully-named "pooh pooh."

What did strike me in these essays was one of Hitchcock's final cautions about teaching the fallacies. "Using the fallacies as a framework for teaching critical thinking," he explains, "draws upon and encourages our sense that we are besieged by persuasive appeals which are subtly deceptive." What could be wrong with that? After all, we do live in a world of subtly persuasive appeals. But Hitchcock continues, "It is pleasing, particularly to young people beginning to think for themselves, to have an arsenal of labels with which to reject attempts of their elders to stampede them into a certain way of thinking" (Blair 326). In other words, we risk teaching our students to resist us, their teachers.

I can imagine the sort of frustrating experiences that might lead a teacher to this conclusion: students so intent on discovering fallacies that they

momentarily lose their ability to spot a good argument. But I can't help seeing the fit between Hitchcock's objection and my own students" experience with Herrnstein--another of the elders, by whom my students certainly feel stampeded. Before I turn to that experience, however, I'd like to place Hitchcock's warning in an historical context, in what I see as two traditions of fallacy, sometimes distinct but more often intertwined--that is, fallacies as mistakes, and fallacies as deliberate deception.

Hitchcock himself sees fallacies mainly as mistakes--thus his objection to teaching good argument by introducing errors. His students, in their resistance to the stampede, follow an older tradition, the fallacies as apparent logic, imitations meant to trap the unsuspecting. Scholars agree that Aristotle's Sophistical Refutations is the earliest list of fallacies, and that these were used in formal debates to trip up one's opponent. Aristotle's intent is debatable--does he offer this list of tricks to be used, eschewed, or simply guarded against? He does speak of the sophist as "one who makes money from an apparent but unreal wisdom" (Hamblin, 50). A more illuminating passage, for me, is this sports metaphor:

> For just as a foul in a race is a definite type of fault, and is a kind of foul fighting, so the art of contentious reasoning is foul fighting in disputation: for in the former case those who are resolved to win at all costs snatch at everything, and so in the latter case do contentious reasoners. (Aristotle 36)

Hamblin gives us another interesting metaphor, from a Roman skeptic, Sextus Empiricus:

> For just as we refuse our assent to the truth of the tricks performed by jugglers and know that they are deluding us, even if we do not know how they do it, so likewise we refuse to believe arguments which, though seemingly plausible, are false, even when we do not know how they are fallacious. (96)

Later European commentators lack this classical confidence in the ordinary person's ability to see the trick. Bacon, with his Idols of the Mind, introduced the problem of self-deception, so that by the 19th century, J.S. Mill can talk about the sophist as either "imposing upon himself or attempting to impose upon others" (93). Self-deception is closer to a simple mistake, and here the sophist is as much sinned against as sinning. But the notion of the fallacy as a deliberate cheat doesn't entirely disappear. Whately devotes a

chapter of his Elements of Logic to fallacies, and talks of "obliquity and disguise" as crucial to their success. The sophist, he observes, keeps important assumptions unstated but implied, "thus keeping out of sight (as a dexterous thief does stolen goods) the point in question, at the very moment when he is taking it for granted" (Whately 77).

Fouls, tricks, theft--these metaphors suggest the uneasiness fallacious reasoning can create. Modern theory, though, seems to back away from this concept of the evil deceiver. This may in part by due to the preoccupation of logicians with the incompatibility of fallacies and most systems of formal logic. Massey, for example, objects that there is no good theory of invalidity, and we pick out fallacies by intuition. Nothing wrong with this, he admits, but intuition "must not be allowed to masquerade as theory" (166). And in a return to the complacency of Sextus Empiricus, he concludes that no theory of invalidity is needed: "That these arguments seem upon careful reflection to be invalid is reason enough to abandon them . . . " (167). Govier, in her reply, argues for the reality of fallacies, despite their imperviousness to theory. But she is also careful to note that the deceptiveness of these strategies is not necessarily intentional, that a fallacy is deceptive "in the sense that it strikes many people as cogent, though it is not" (173).

This modern urge to defang the serpent appears in a more extensive fallacy treatment, in Van Eemeren and Grootendorst's pragma-dialectical approach. Fallacies here have lost even their taint of self-deception. Instead, they are the "faux pas of communication--. . . wrong moves in argumentation discourse" (130). Argument itself is seen as the resolution of disagreement--not as a race, a theft, a stampede. And participants, pro and con, "must in all stages of the discussion observe all the rules that are instrumental to resolving the dispute" (135). So, we assume, both have that goal in mind, at the outset. Neither is going to snatch the prize, hide the goods, or run roughshod over the other. Both, in short, will behave in a gentlemanly fashion, observing Van Eemeren and Grootendorst's ten rules. The rules are exhaustive and exquisitely polite. I offer as a sample #10: "A party must not use formulations that are insufficiently clear or confusingly ambiguous and he must interpret the other party's formulations as carefully and accurately as possible" (Van Eemeren and Grootendorst 136). Van Eemeren and Grootendorst then do an amazing, and credible, job of fitting

the traditional fallacies under their ten rules. After all, if the rules are broken, differences can't be resolved, and the end of argument is frustrated.

I'd like to think of argument this way, sort of like table tennis, a friendly game, with agreed-upon rules. But I see Aristotle's cheat and Whately's thief sneaking in the back door. And their goal isn't to resolve differences, but to use all means, fair and foul, to stampede us into their way of thinking. I suspect they aren't going to play by the rules.

So let's turn to Herrnstein, who manages to persuade most of my students that the economic well-being of America does in fact depend on the sacrifices of educated young women, who will have to forego careers to raise larger families. Students accept this conclusion reluctantly, but they do accept it. What convinces them?

Well, ethos is part of the answer--Herrnstein begins the essay with a reference to his tenure at Harvard, and makes clear that he is an academic authority. He also uses an empirical density--his article bristles with facts and figures, statistics and studies. Most convincing, however, are his fallacies, that is, chains of reasoning that are apparently logical. Here is one of the best examples, a biological justification for assigning women the task of raising children:

> Another biological approach to the demographic transition looks at the differing pressures of parenthood on women and men. Females and males inevitably have different investments in offspring. Mothering is more depleting than fathering. For example, the number of ova per woman is quite limited, compared with the virtually unlimited number of sperm per man. A woman can have little more than one pregnancy a year; a man has no such limitation on his reproductive rate. Each of a woman's children represents a greater fraction of her reproductive potential than does each of a man's. Because she invests more in each child, she is more vulnerable biologically, and perhaps psychologically, to anything that threatens an offspring. Because of this special vulnerability, the customary sexual division of labor--whether or not its origins are inherited--places on mothers a disproportionate share of the burdens of child-rearing. (Herrnstein 75)

As in most fallacious reasoning, there are a number of subterfuges here, and they could be classified in a number of ways. I treat this paragraph as a species of "slippery slope," that is, an argument that begins with an unobjectionable premise, but then slides slowly to an illogical conclusion. Herrnstein's first premise is a good one--men do in fact have virtually unlimited sperm. The next step is problematic. While it is true that an individual man can have more than one child a year, the reproductive rate of men as a group will always be limited by the female reproductive rate, because there are a limited number of female wombs for those male sperm to occupy. The next step is equally questionable, in a purely biological sense. If a child is represented as a fraction of reproductive cells available over a lifetime, that child does seem a greater biological investment for the woman. But Herrnstein ignores a basic fact of reproduction: it takes millions of sperm in each ejaculate to make possible the fertilization of one egg. So this comparison is inappropriate--unless we're thinking of in vitro procedures, where a single sperm cell might suffice.

Students sometimes find it difficult to see these problems in Herrnstein's reasoning, even though their common sense tells them that men have about the same number of children as women. That invocation of unlimited sperm and its promise of unlimited reproduction has a strong hold on their imaginations. It can be counteracted, though, by equally vivid images, like one student's explanation that men could out-reproduce women if the human race were proportioned like "Surf City," with two girls for every boy.

The next step does seem fallacious to them, although it has the whole sociobiological theory behind it, that is, that biology determines social roles. But students reject this connection, that the female maternal urge is a result of fewer reproductive cells. They suggest a different connection, i.e., pregnancy and childbirth predispose women to care more for children. And it's this experience, not a vulnerability based on reproductive potential, that accounts for the customary division of labor.

Textbook examples of slippery slope usually end with wildly improbable conclusions, i.e., that a speech code on campus will lead to widespread censorship, and eventually to absolute silence. Or my favorite, an actual argument in a legal case of sexual harassment, that company anti-dating policies would inhibit courtships, and thus marriages, and finally

procreation, leading to the extinction of the human species. But Herrnstein's slope ends in a commonplace, that women do more childcare than men. The goal of his slippery slope, however, is not to reach this conclusion, but to offer a biological explanation of it. Biology, for Herrnstein, is destiny. He makes clear in this article that it's the genetic basis of intelligence that causes the wealthy to succeed and poorer folks to fail, not any system of privilege in our social order. And it's female biological inferiority, those paltry 500 or so eggs against those billions of sperm, that cause women to be saddled with the burdens of childcare.

But is this fallacy deliberate? Or has Herrnstein honestly confused himself as well as his readers? My course follows with an excerpt from Stephen Jay Gould's study of 19th century racist science, The Mismeasure of Man. My students identify the logical problems in these theories quickly, and just as quickly attribute them to backwardness and malice. Gould himself is more charitable, constantly reminding us of the self-deluding power of cherished a priori assumptions. My students tend to extend this same charity to Herrnstein; they are more willing to believe him confused than deliberately deceptive.

I nudge them toward my more cynical view. Consider the consequences, I suggest. What would change in American life if his argument were accepted? Well, since the poor produce lower-quality offspring, perhaps we could encourage them not to reproduce so prolifically (Limit AFDC benefits?). And if the children of poor families are less likely to have the genetic prerequisites for educational success, perhaps we needn't bother with opening up opportunities for them (Eliminate affirmative action programs?). If upper-class women have the best children, they should be encouraged to have more (Limit access to abortion?). And if women are destined by biology for childcare, let's encourage them to do that. As Herrnstein suggests, "At the very least, we should stop telling bright young women that they make poor use of their lives by bearing and raising children, as commencement speakers and others have implied to educated women for decades" (81). Herrnstein assumes the bright young women will still be at commencement--but what need will they have of advanced degrees? However honorable a calling, childcare doesn't require M.D.'s, J.D.'s or Ph.D.'s. Many women might decide it doesn't even require a bachelor's. So we can return to those good old days, when families only had

to finance college education for their sons, and graduate and professional schools weren't clogged by bright young women. And the disappearance of the bright young women would help the not-quite-so-bright young men get into those schools, and then those high-paying jobs--which they'll need to do, to support their bright young stay-at-home wives, and their large families.

This vision of the Herrnsteinian future isn't persuasive to all my students. And, yes, some do turn their newly-acquired tools on me, and accuse me of constructing my own slippery slope. Others find it merely coincidental that Herrnstein's scientific commitments have these elitist consequences. I don't mind. I've planted the seeds of distrust, and that's my pedagogical goal. After all, the world my students will inhabit is full of intellectual cheaters, tricksters and thieves. Teaching the fallacies is just another way of warning them that argument, like life, is not always fair.

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